

REMARKS

In the Office Action, all claims were rejected under 35 U.S.C. § 103(a). Independent Claim 1 was rejected over U.S. Application Publication No. 2002/0080391 (Sugiura) in view of U.S. Patent No. 6,816,270 (Cooper). Independent Claim 33 was rejected over Sugiura and Cooper in view of U.S. Patent No. 6,611,863 (Banginwar). The remaining claims are all dependent, and were rejected as above, or further in view of one or more of the following: U.S. Patent No. 6,240,456 (Teng), U.S. Patent No. 6,757,280 (Wilson), U.S. Patent No. 6,157,950 (Krishnan), U.S. Patent No. 6,020,973 (Levine), and U.S. Patent No. 6,742,039 (Remer).

The rejections are respectfully traversed, and the Examiner is requested to reconsider and withdraw the rejections in light of the following comments.

Claim 1

The invention of independent Claim 1 generally concerns a method for mimicking network devices. The method is performed in a computing device having first and second network interface cards. The first network interface card connects the computing device to an external network, and the second network interface card connects the computing device to a local network. Among its many features, the invention of Claim 1 includes the features of (i) receiving an incoming message from a client network device residing on an external network, the incoming message being addressed to a network address of a target network device residing on a local network, (ii) determining if an application module residing in a computing device is configured to process a functionality requested by the incoming message, (iii) redirecting the incoming message to the application module in the case that the application module is configured to process the

functionality, and (iv) passing the incoming message through the local network to the target network device residing on the local network in the case that the application module is not configured to process the functionality.

Referring specifically to claim language, independent Claim 1 is directed to a method for mimicking network devices, the method being performed in a computing device having first and second network interface cards, the first network interface card connecting the computing device to an external network and the second network interface card connecting the computing device to a local network. The method includes receiving an incoming message from a client network device residing on the external network, the incoming message being addressed to a network address of a target network device residing on the local network. The method also includes determining if an application module residing in the computing device is configured to process a functionality requested by the incoming message. Additionally, the method includes redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, and passing the incoming message through the local network to the target network device residing on the local network in the case that the application module is not configured to process the functionality.

The applied art is not seen to disclose or suggest the features of Claim 1, and in particular is not seen to disclose or suggest at least the features of (i) receiving an incoming message from a client network device residing on an external network, the incoming message being addressed to a network address of a target network device residing on a local network, (ii) determining if an application module residing in a computing device is configured to process a functionality requested by the incoming

message, (iii) redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, and (iv) passing the incoming message through the local network to the target network device residing on the local network in the case that the application module is not configured to process the functionality.

As understood by Applicants, Sugiura discloses a print control method in which a computer of a LAN transmits print data to a printer of another LAN via the Internet. On the Internet, a terminal device transmits print data to a print server managing a printer, so as to use the printer for printing. HTTP is used as a communication protocol between the terminal device and the print server. In the terminal device, a header including information about the printer to be used is added to the print data, which are transmitted. In the print server, the print data are received, and the print data are transmitted to the printer in accordance with the header of the print data. See Sugiura, Abstract.

Page 3 of the Office Action asserts that Sugiura (paragraphs 0113, 0123 and 0124) discloses receiving an incoming message from a client network device residing on an external network, the message being addressed to a target network device.

Although it is true that Sugiura receives an incoming message, the incoming message is not addressed to a target network device on a local network. In particular, while the content of the incoming message might contain an address of a target printer (i.e., device) on a network, the message itself is not addressed to the target printer. Rather, the incoming message is addressed to the print server. See Sugiura, Abstract and Figure 11. The print server, and specifically the HTTP data acquiring portion thereof, subsequently uses an HTTP header in the content of the message to transmit the message to the target

printer. See Sugiura, Abstract, Figures 2 and 11 and paragraphs 0057 and 0095 to 0098. Even in an embodiment where the HTTP acquiring portion is located in an HTTP server rather than the print server, the message is still transmitted to the servers for sending to the target printer, rather than being addressed directly to the target printer. See Sugiura, paragraphs 0123 and 0124.

In this sense, the disclosure of Sugiura is similar to that of Teng. Teng was applied as a primary reference in earlier Office Actions, but these rejections were withdrawn following the interview conducted on January 12, 2006. At the interview, it was explained that the present invention includes redirecting of messages that are not necessarily addressed to the claimed "computing device", and rather are addressed to target network devices residing on a local network, whereas in Teng all messages are addressed to the network server. Particular attention was focused on Column 5, wherein Teng discloses that the URL address for a logical endpoint (e.g., the printer 50) has a basic form corresponding to "HTTP://server/share/share_name/.../item". Teng, Column 5, line 55 (emphasis added). Thus, it was explained that although the HTTP message of Teng might be routed to a logical endpoint, Teng shows that the message is addressed to the network server and not to the endpoint.

Like Teng, Sugiura's messages are not addressed to a logical endpoint (the target printer), and rather are addressed to a server, which may then use the content of the message to route the message. In particular, Sugiura's print server, like Teng's network server, uses the content of a message (specifically, the HTTP header) to route the message to a target. Accordingly, as in Teng, while Sugiura's messages may be routed to a logical endpoint, the message is addressed to a server and not to the endpoint.

Accordingly, Sugiura is not seen to disclose or suggest the feature of receiving an incoming message from a client network device residing on an external network, wherein the incoming message is addressed to a network address of a target network device residing on a local network.

Sugiura is also not seen to disclose or suggest any of the other above-noted features. In this regard, page 3 of the Office Action concedes that Sugiura does not teach determining if an application module residing in a computing device is configured to process a functionality requested by an incoming message. Applicants agree, and submit that with this understanding of Sugiura, it logically follows that Sugiura also can not disclose redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, and passing the incoming message through the local network to a target network device in the case that the application module is not configured to process the functionality.

Cooper is not seen to remedy the above-noted deficiencies of Sugiura. As understood by Applicants, Cooper discloses a method for processing a print job. A call is received from an application to print the print job to a selected printer, wherein the print job includes a request to use a hardware service. A print preview is provided, and if an indication to print is received, the print job is sent to a device driver for the selected printer to print the print job. A determination is made as to whether the selected printer supports the hardware service. If the hardware service is unsupported by the selected printer, the hardware service is provided using a software simulation. See Cooper, Abstract.

Page 3 of the Office Action asserts that Cooper (Column 6, lines 23 to 34 and Column 7, lines 29 to 62) discloses determining if an application module residing in a

computing device is configured to process a functionality requested by an incoming message, redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, and passing the incoming message to the target network device in the case that the application module is not configured to process the functionality.

However, Applicants respectfully submit that Cooper is not seen to disclose or suggest any of these features.

In particular, Cooper's Intelligent Print Driver (IPD) is not seen to determine whether a requested hardware service can be performed by an application module residing in the IPD. Rather, the determination is whether the requested hardware service can be performed by the selected printer. See Cooper, Abstract, Column 1, lines 59 to 61 and Column 6, lines 23 to 34. In contrast, the invention of Claim 1 determines if an application module residing in a computing device is configured to process the functionality requested by a message that is addressed to a target device.

Inasmuch as Cooper is not seen to disclose the feature of determining whether an application module is configured to process the functionality requested by a message, Cooper is also not seen to disclose or suggest the features of redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, or passing the incoming message through the local network to a target network device residing on the local network in the case that the application module is not configured to process the functionality.

Moreover, once Cooper's IPD determines that a target printer cannot perform a hardware service requested by a print job, the requested service is simulated by

software at the same computer where the print job already is. See Cooper, Figure 6 and Column 7, lines 17 to 62. In particular, the IPD, which also provides the software simulation, resides in the user's computer between the application layer and the device driver layer. See Cooper, Column 5, lines 33 to 43 and Column 6, lines 32 to 34 and 55 to 65. Thus, Cooper is not seen to disclose any redirection of a message in the case that a printer cannot perform a service requested by a print job, as in that case the service is provided by the IPD in the very same computer to which the request is made.

Additionally, regardless of whether or not Cooper's IPD simulates hardware services for a print job beforehand, the print job is eventually sent to the selected platform for printing. See Cooper, Figure 6 and Column 7, lines 43 to 62. Therefore, in Cooper, the sending of a message to a selected platform is clearly not based on any determination of whether a functionality can be processed by the IPD. In fact, Cooper is not seen to even disclose a situation in which the IPD can not perform a requested hardware service. In contrast, the invention of Claim 1 passes an incoming message through a local network to a target network device residing on the local network in the case that an application module is not configured to process the functionality requested by a message.

Accordingly, Cooper is not seen to disclose or suggest determining if an application module residing in a computing device is configured to process a functionality requested by an incoming message, redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, or passing the incoming message to a target network device in the case that the application module is not configured to process the functionality.

Teng, Banginwar, Wilson, Krishnan, Levine and Remer have been reviewed and are not seen to remedy the above-noted deficiencies of Sugiura and Cooper.

Therefore, Claim 1 is believed to be in condition for allowance, and such action is respectfully requested.

Claim 33

The invention of independent Claim 33 likewise generally concerns a method for mimicking network devices. The method is performed in a computing device having first and second network interface cards, the first card connecting the computing device to an external network and the second card connecting the computing device to a local network. Among its many features, the invention of Claim 33 includes the features of (i) receiving an incoming message from a client network device residing on an external network, the incoming message being addressed to an IP address of a designated one of a plurality of target network devices, (ii) determining if the incoming message requests a functionality that an application module is configured to perform, (iii) redirecting, in the case that the incoming message requests a functionality that the application module is configured to perform, the incoming message to the application module which performs the requested functionality in response to the incoming message, and (iv) passing, in the case that the incoming message does not request a functionality that the application module is configured to perform, the incoming message through the local network to the designated target network device.

Referring specifically to claim language, independent Claim 33 is directed towards a method for mimicking network devices, the method being performed in a computing device having first and second network interface cards, the first network

interface card connecting the computing device to an external network and the second network interface card connecting the computing device to a local network. The method includes discovering a plurality of target network devices on the local network by detecting messages on the local network from each of the plurality of target network devices, and creating a rule in a rules table for each of the discovered target network devices, each rule containing the IP address of the corresponding target network device and indicating whether an application module in the computing device is configured to perform a function on behalf of the corresponding target network device. The method also includes receiving an incoming message from a client network device residing on the external network, the incoming message being addressed to an IP address of a designated one of the plurality of target network devices. Additionally, the method includes determining, based at least in part on the rule corresponding to the designated target network device, if the incoming message requests a functionality that the application module is configured to perform. The method further includes redirecting, in the case that the incoming message requests a functionality that the application module is configured to perform, the incoming message to the application module which performs the requested functionality in response to the incoming message. The method also includes passing, in the case that the incoming message does not request a functionality that the application module is configured to perform, the incoming message through the local network to the designated target network device.

The applied art is not seen to disclose or suggest the features of Claim 33, and in particular is not seen to disclose or suggest at least the features of (i) receiving an incoming message from a client network device residing on the external network, the

incoming message being addressed to an IP address of a designated one of the plurality of target network devices, (ii) determining if the incoming message requests a functionality that an application module is configured to perform, (iii) redirecting, in the case that the incoming message requests a functionality that the application module is configured to perform, the incoming message to the application module which performs the requested functionality in response to the incoming message, and (iv) passing, in the case that the incoming message does not request a functionality that the application module is configured to perform, the incoming message through the local network to the designated target network device.

In this regard, page 14 of the Office Action asserts that Sugiura (paragraphs 0095, 0113, 0123 and 0124) discloses receiving an incoming message from a client network device residing on an external network, the incoming message being addressed to an IP address of a designated target network printer.

However, as discussed above, Sugiura fails to disclose or suggest receiving an incoming message from a client network device on an external network, wherein the message is addressed to a network address of a target network device on a local network. Sugiura's messages are addressed to the print server, rather than the target printer, and it is the content of these messages that contain the address of the target printer (in an HTTP header). For the same reason, Sugiura is also not seen to disclose or suggest receiving an incoming message from a client network device residing on an external network, the incoming message being addressed to an IP address of a designated one of a plurality of target network devices on a local network.

Page 14 of the Office Action also asserts that Cooper discloses “determining, if the incoming message requests a functionality that the application module (e.g. installable component 126) is configured to perform (col. 6, lines 23-34; col. 7, lines 29-62); redirecting, in the case that the incoming message requests a functionality that the application module is configured to perform, the incoming message to the application module which performs the requested functionality in response to the incoming message (col. 6, lines 23-34; col. 7, lines 29-62); and passing, in the case that the incoming message does not request a functionality that the application module is configured to perform, the incoming message to the designated network target printer[.]”

However, Applicants respectfully submit that Cooper is not seen to disclose or suggest any of these features.

In this regard, the Office Action’s reference to “installable components 126” is not understood, as Cooper does not mention installable components, and does not include a reference number 126. The other references used against Claim 33, specifically Sugiura and Banginwar, also do not mention installable components or include a reference number 126. It is thought that the Office Action might have intended to refer to the Teng patent. If so, and insofar as there was an intention to incorporate Teng in the rejection of Claim 33, Applicants respectfully direct the Examiner’s attention to the remarks in the Amendment and Statement of Summary of Interview dated January 20, 2006. Additionally, if this rejection is repeated, Applicants respectfully request that the Office Action confirm the identity and content of the references used in the rejection.

Moreover, as discussed in detail above in regards to Claim 1, Cooper is not seen to disclose or suggest the features of determining if an application module residing in

a computing device is configured to process a functionality requested by an incoming message, redirecting the incoming message to the application module in the case that the application module is configured to process the functionality, and passing the incoming message to a target network device residing on the local network in the case that the application module is not configured to process the functionality.

Accordingly, Applicants respectfully submit that Cooper is also not seen to disclose or suggest the features of determining if an incoming message requests a functionality that an application module is configured to perform, redirecting, in the case that the incoming message requests a functionality that the application module is configured to perform, the incoming message to the application module which performs the requested functionality in response to the incoming message, and passing, in the case that the incoming message does not request a functionality that the application module is configured to perform, the incoming message through the local network to the designated target network device.

Teng, Banginwar, Wilson, Krishnan, Levine and Rcmr have been reviewed and are not seen to remedy the above-noted deficiencies of Sugiura and Cooper.

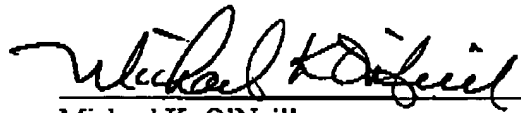
Therefore, independent Claim 33 is believed to be in condition for allowance, and such action is respectfully requested.

The other claims in the application are each dependent from the independent claims discussed above and are therefore believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, the entire application is believed to be in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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